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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,820	03/18/2004	Mitsuhiro Murata	119155	5892
25944	7590	02/06/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			HOLMES, JUSTIN K	
			ART UNIT	PAPER NUMBER
			3681	
DATE MAILED: 02/06/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,820	MURATA ET AL.	
	Examiner	Art Unit	
	Justin K. Holmes	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 6 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/5/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species 1 claims 1-10 and 12-14 in the reply filed on September 6, 2005 is acknowledged. The traversal is on the ground(s) that the species are sufficiently related such that a search for the subject matter of any one species would encompass a search for the subject matter of the remaining species. This is not found persuasive because the remaining species 2 and 3 are patentably distinguishable from the embodiment shown in species 1.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species 3, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 6, 2005.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on January 5, 2006 was filed after the mailing date of the First Office Action on October 18, 2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 7-10, 13, 14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of U.S. Patent No. 3,527,121 to Moore and in view of U.S. Patent No. 5,609,542 to Kusumoto et al.

Regarding Claims 1, 9, 10 and 16, the Isozumi et al. patent teaches a starter unit having a motor 4 generating a rotating force, a planetary gear speed reducer 9 that reduces a speed of rotation of the motor. The planetary gear speed reducer 9 has a planet carrier 8 having a first surface, the leftmost vertical surface of carrier 8 in Fig. 2, and a second opposite surface, the rightmost vertical surface of carrier 8, the with gear shafts 9c projecting from a surface of the planet carrier 8 and a plurality of planetary gears 9d supported by the gear shafts 9c. See column 1, lines 15-60 and Fig. 2. The Isozumi et al. patent lacks the teaching of the planet carrier further forming projections projecting in a direction same as that of the gear shafts and that the projections and gear shafts are integrally formed with the planet carrier.

The Moore patent teaches a carrier 20 for a planetary gear system to hold planetary gears having end walls 22 and 24. A plurality of long pinion pins 48 are secured in apertures 40 and 42 and extend from end wall 24 to end wall 22. A plurality of short pinion pins 58 are secured in apertures 44 and 46 and extend from end wall 24 to end wall 22. The "projections" as broadly defined in Claim 1 are defined as the short pinion pins 58 in the Moore patent. Long pinions 54 are mounted on the long pinion pins 48. See column 2, lines 29-43 and Figs. 1 and 2.

The Kusumoto et al. patent teaches that the planetary carrier or flange 11 can be forged in column 4, lines 52-55. The supporting pins 22 that support planetary gears are formed by a series of steps that press the supporting pins 22 out from the flange 11 using punches 31 and 32 and die 40. See column 4, lines 55-67 and column 5, lines 1-33 and Figs. 2A-2D. The supporting pins 22 are therefore integrally formed with the flange section 20 and has a continuous metal flow from the flange section 20 and flange 11 to the supporting pins 22. See column 5, lines 34-38. As seen in Fig. 1, the outer surface of the supporting pins 22 is continuous form the first surface of the planet carrier.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al. patent to have a planetary carrier as taught in the Moore with gear shafts and projections and to make it using cold forging as taught by the Kusumoto et al. patent. The motivation for doing so would be to reduce the number of parts, achieve greater ease of assembly, and reduce the cost of the carrier as taught in the Kusumoto et al. patent in column 5, lines 34-38 and to provide for a carrier having minimum size and maximum rigidity to transfer torque. See column 2, lines 66-68 in the Moore patent.

Regarding Claim 2, the Moore patent teaches that the short pinion pins 58 are in the form of a pin shape. See Fig. 1.

Regarding Claim 3, the Moore patent teaches that the long pinion pins 48 are arranged in a pin center circle 72 that is coincident with a rotation axis of the planet carrier 20. See column 2, lines 42-50. The short pinion pins 58 are arranged in a pin

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center circle 74 that is coincident with the rotation axis of the planet carrier 20 and has a diameter different than that of the pin center circle 72. See column 2, lines 69-72 and Figs. 1 and 2.

Regarding Claim 4, the Moore patent teaches that the short pinion pins 58 are disposed at positions without interfering with the long pinions 52. See Figs. 1 and 2.

Regarding Claims 7, 8, 13, 14 and 18, the Isozumi et al. patent teaches an over-running clutch 10 having a clutch outer portion 10b and a clutch inner portion 10a. The "one-way clutch" as broadly recited in Claims 7, 8, 13 and 14 is defined as an over-running clutch by the Isozumi et al. patent. The clutch outer portion 10b is disposed to receive the rotation from the planetary gear speed reducer 9 and transmit rotation to the clutch inner portion 10a. See column 1, lines 30-36, and lines 43-60. The clutch outer portion 10b is integrally formed with the planet carrier and the drive force transmitting device 8. The clutch outer portion 10b holds the support shafts 9c that hold the planetary pinions 9d. The clutch outer portion 10b has a cylindrical shape and the inner peripheral wall of the clutch outer portion is continuous from the second surface of the planet carrier 8. See Fig. 2.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of U.S. Patent No. 3,527,121 to Moore and in view of U.S. Patent No. 5,609,542 to Kusumoto et al. as applied to claim 1 above, and further in view of U.S. Patent No. 4,249,964 to Bambuch et al.

The Isozumi et al., Moore and Kusumoto et al. patents lack a teaching that the planet carrier has a heat treated layer on its surface including the surfaces of the gear

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shafts and the projections and that the heat treated layer has a hardness equal to or higher than 50HRC formed by heat treatment.

The Bambuch et al. patent teaches a process for chemical and thermal treatment of steel parts such as gear wheels, shafts and sleeves. See column 1, lines 7-10. The Bambuch et al. patent teaches that the steps of carburizing, hardening and tempering of parts takes place. See column 3, lines 34-63. The resulting product has a hardness of 62-63 HRC. See column 4, lines 1-10 and table in column 5.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al., Moore and Kusumoto et al. patents to include the chemical and thermal treatment as taught by the Bambuch et al. patent. The motivation for doing so would be improve the hardness and fatigue strength and to substantially uniform the surfaces as taught in the Bambuch et al. patent. See column 1, lines 10-12 in the Bambuch et al. patent.

7. Claims 1, 2, 4, 7 –10, 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of European Patent Application No. 0086494 to Seki et al. and in view of U.S. Patent No. 5,609,542 to Kusumoto et al.

Regarding Claims 1, 9, 10 and 16, the Isozumi et al. patent teaches a starter unit having a motor 4 generating a rotating force, a planetary gear speed reducer 9 that reduces a speed of rotation of the motor. The planetary gear speed reducer 9 has a planet carrier 8 having a first surface, the leftmost vertical surface of carrier 8 in Fig. 2, and a second opposite surface, the rightmost vertical surface of carrier 8, the with gear

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shafts 9c projecting from a surface of the planet carrier 8 and a plurality of planetary gears 9d supported by the gear shafts 9c. See column 1, lines 15-60 and Fig. 2. The Isozumi et al. patent lacks the teaching of the planet carrier further forming projections projecting in a direction same as that of the gear shafts and that the projections and gear shafts are integrally formed with the planet carrier.

The Seki et al. application teaches a carrier 25 for a planetary gear system to hold planetary gears having end walls 27 and 28. A plurality of gear shafts 26 extend from end wall 27 to end wall 28. A plurality of fixing rods 29 extend from end wall 27 to end wall 28. The "projections" as broadly defined in Claim 1 are defined as the fixing pins 29 in the Seki et al. application. Planet gears 24 are mounted on the gear shafts 26. See page 8, lines 17-29 and page 9, lines 5-6 and Figs. 1 and 2.

The Kusumoto et al. patent teaches that the planetary carrier or flange 11 can be forged in column 4, lines 52-55. The supporting pins 22 that support planetary gears are formed by a series of steps that press the supporting pins 22 out from the flange 11 using punches 31 and 32 and die 40. See column 4, lines 55-67 and column 5, lines 1-33 and Figs. 2A-2D. The supporting pins 22 are therefore integrally formed with the flange section 20 and has a continuous metal flow from the flange section 20 and flange 11 to the supporting pins 22. See column 5, lines 34-38. As seen in Fig. 1, the outer surface of the supporting pins 22 is continuous form the first surface of the planet carrier.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al. patent to have a planetary

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carrier as taught in Seki et al. with gear shafts and projections and to make it using cold forging as taught by the Kusumoto et al. patent. The motivation for doing so would be to reduce the number of parts, achieve greater ease of assembly, and reduce the cost of the carrier as taught in the Kusumoto et al. patent in column 5, lines 34-38 and to provide for a carrier with maximum rigidity to transfer torque. See page 11, lines 12-26 in the Seki et al. application.

Regarding Claim 2, the Seki et al. application teaches that the fixing rods 29 are in the form of a pin shape. See Fig. 1.

Regarding Claim 4, the Seki et al. application teaches that the fixing rods 29 are disposed at positions without interfering with the gear shafts 26. See Figs. 1 and 2.

Regarding Claims 7, 8, 13, 14 and 18, the Isozumi et al. patent teaches an over-running clutch 10 having a clutch outer portion 10b and a clutch inner portion 10a. The "one-way clutch" as broadly recited in Claims 7, 8, 13 and 14 is defined as an over-running clutch by the Isozumi et al. patent. The clutch outer portion 10b is disposed to receive the rotation from the planetary gear speed reducer 9 and transmit rotation to the clutch inner portion 10a. See column 1, lines 30-36, and lines 43-60. The clutch outer portion 10b is integrally formed with the planet carrier and the drive force transmitting device 8. The clutch outer portion 10b holds the support shafts 9c that hold the planetary pinions 9d. The clutch outer portion 10b has a cylindrical shape and the inner peripheral wall of the clutch outer portion is continuous from the second surface of the planet carrier 8. See Fig. 2.

Regarding Claim 15, the Seki et al. application teaches that only the gear shafts 26 support planetary gears 24. See Figs. 1 and 2.

Regarding Claim 17, the Seki et al. application teaches that the gear shafts 26 and fixing rods 29 are the same length. See Fig. 1.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of European Patent Application No. 0086494 to Seki et al. and in view of U.S. Patent No. 5,609,542 to Kusumoto et al. as applied to claim 1 above, and further in view of U.S. Patent No. 4,249,964 to Bambuch et al.

The Isozumi et al., Seki et al. and Kusumoto et al. patents lack a teaching that the planet carrier has a heat treated layer on its surface including the surfaces of the gear shafts and the projections and that the heat treated layer has a hardness equal to or higher than 50HRC formed by heat treatment.

The Bambuch et al. patent teaches a process for chemical and thermal treatment of steel parts such as gear wheels, shafts and sleeves. See column 1, lines 7-10. The Bambuch et al. patent teaches that the steps of carburizing, hardening and tempering of parts takes place. See column 3, lines 34-63. The resulting product has a hardness of 62-63 HRC. See column 4, lines 1-10 and table in column 5.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al., Seki et al. and Kusumoto et al. patents to include the chemical and thermal treatment as taught by the Bambuch et al. patent. The motivation for doing so would be improve the hardness and fatigue

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strength and to substantially uniform the surfaces as taught in the Bambuch et al.

patent. See column 1, lines 10-12 in the Bambuch et al. patent.

9. Claims 1, 3, 4, 7-10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of U.S. Patent No. 5,470,286 to Fan and in view of U.S. Patent No. 5,609,542 to Kusumoto et al.

Regarding Claims 1, 9, 10 and 16, the Isozumi et al. patent teaches a starter unit having a motor 4 generating a rotating force, a planetary gear speed reducer 9 that reduces a speed of rotation of the motor. The planetary gear speed reducer 9 has a planet carrier 8 having a first surface, the leftmost vertical surface of carrier 8 in Fig. 2, and a second opposite surface, the rightmost vertical surface of carrier 8, the with gear shafts 9c projecting from a surface of the planet carrier 8 and a plurality of planetary gears 9d supported by the gear shafts 9c. See column 1, lines 15-60 and Fig. 2. The Isozumi et al. patent lacks the teaching of the planet carrier further forming projections projecting in a direction same as that of the gear shafts and that the projections and gear shafts are integrally formed with the planet carrier.

The Fan patent teaches a carrier 10 for a planetary gear system to hold planetary gears having base portion 12 and spider portion 14. A plurality of support pins 18 are extend from the spider portion 14 to the base portion 12. A plurality of legs 42 extend from the spider portion 14 to the base portion 12. The "projections" as broadly defined in Claim 1 are defined as the legs 42. Planet gears 16 are mounted on the support pins 18. See 4, lines 56-60 and column 5, lines 23-35 and Figs. 1 and 3.

The Kusumoto et al. patent teaches that the planetary carrier or flange 11 can be forged in column 4, lines 52-55. The supporting pins 22 that support planetary gears are formed by a series of steps that press the supporting pins 22 out from the flange 11 using punches 31 and 32 and die 40. See column 4, lines 55-67 and column 5, lines 1-33 and Figs. 2A-2D. The supporting pins 22 are therefore integrally formed with the flange section 20 and has a continuous metal flow from the flange section 20 and flange 11 to the supporting pins 22. See column 5, lines 34-38. As seen in Fig. 1, the outer surface of the supporting pins 22 is continuous form the first surface of the planet carrier.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al. patent to have a planetary carrier as taught in the Fan patent with gear shafts and projections and to make it using cold forging as taught by the Kusumoto et al. patent. The motivation for doing so would be to reduce the number of parts, achieve greater ease of assembly, and reduce the cost of the carrier as taught in the Kusumoto et al. patent in column 5, lines 34-38 and to provide for a carrier having minimum size and maximum rigidity to transfer torque. See column 2, lines 46-52 in the Fan patent.

Regarding Claim 3, the Fan patent teaches that the support pins 18 are arranged in a pin center circle that is coincident with a rotation axis of the planet carrier 10. The support legs 42 are arranged on the outer circumference of the spider 14 that is coincident with the rotation axis of the planet carrier 10 and has a diameter different than that of the pin center circle. See Figs. 1 and 3.

Regarding Claim 4, the Fan patent teaches that the support pins 28 are disposed at positions without interfering with the support legs 42. See Figs. 1 and 3.

Regarding Claims 7, 8, 13, 14 and 18, the Isozumi et al. patent teaches an over-running clutch 10 having a clutch outer portion 10b and a clutch inner portion 10a. The "one-way clutch" as broadly recited in Claims 7, 8, 13 and 14 is defined as an over-running clutch by the Isozumi et al. patent. The clutch outer portion 10b is disposed to receive the rotation from the planetary gear speed reducer 9 and transmit rotation to the clutch inner portion 10a. See column 1, lines 30-36, and lines 43-60. The clutch outer portion 10b is integrally formed with the planet carrier and the drive force transmitting device 8. The clutch outer portion 10b holds the support shafts 9c that hold the planetary pinions 9d. The clutch outer portion 10b has a cylindrical shape and the inner peripheral wall of the clutch outer portion is continuous from the second surface of the planet carrier 8. See Fig. 2.

Regarding Claim 15, the Fan patent teaches that only the support pins 28 support the planetary gears 16.

Regarding Claim 17, the Fan patent teaches that the support pins 28 and the support legs are the same length. See Fig. 3.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,115,689 to Isozumi et al. in view of U.S. Patent No. 5,470,286 to Fan and in view of U.S. Patent No. 5,609,542 to Kusumoto et al. as applied to claim 1 above, and further in view of U.S. Patent No. 4,249,964 to Bambuch et al.

The Isozumi et al., Fan and Kusumoto et al. patents lack a teaching that the planet carrier has a heat treated layer on its surface including the surfaces of the gear shafts and the projections and that the heat treated layer has a hardness equal to or higher than 50HRC formed by heat treatment.

The Bambuch et al. patent teaches a process for chemical and thermal treatment of steel parts such as gear wheels, shafts and sleeves. See column 1, lines 7-10. The Bambuch et al. patent teaches that the steps of carburizing, hardening and tempering of parts takes place. See column 3, lines 34-63. The resulting product has a hardness of 62-63 HRC. See column 4, lines 1-10 and table in column 5.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Isozumi et al., Fan and Kusumoto et al. patents to include the chemical and thermal treatment as taught by the Bambuch et al. patent. The motivation for doing so would be improve the hardness and fatigue strength and to substantially uniform the surfaces as taught in the Bambuch et al. patent. See column 1, lines 10-12 in the Bambuch et al. patent.

Response to Arguments

11. Applicant's arguments filed January 5, 2006 have been fully considered but they are not persuasive. Specifically, with regard to Claims 1-4, 7, 8, 13, 14 and the rejection under 35 USC 103(a) over U.S. Patent No. 5,115,689 to Isozumi et al. in view of U.S. Patent No. 3,527,121 to Moore the Applicant has argued that the combination of the references is improper and that there is no motivation to combine the references.

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12. In response to applicant's argument that there is no suggestion or motivation to combine the references, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

13. In response to applicant's argument that one skilled in the art would not combine the Moore teachings with the Isozumi et al. reference since one reference deals with transmissions and the other with starters, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

14. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Allowable Subject Matter

15. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claim 19 and 20 are allowed.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,434,827 to Trent et al. teaches a carrier.

Facsimile Transmission

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee

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but charging such fee to a deposit account, can be submitted by facsimile transmission.

Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin K. Holmes whose telephone number is (571) 272-5930. The examiner can normally be reached on 8:00am to 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JKH
1/28/06


CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
ART UNIT 3681